



IN THE CLAIMS

Following is a complete set of claims as amended with this Response. This complete set of claims excludes cancelled claims 2, 3, and 6 and includes amended claims 1, 5, 9, 14, and 16.

What is claimed is:

Sub C1

1. (Amended) A method comprising:

performing asynchronous transfer mode (ATM) segmentation functions with a segmentation and reassembly (SAR) software module implemented in a central processing unit (CPU) including,

receiving data to send;

segmenting the data to generate a plurality of ATM cells;

buffering the plurality of ATM cells in a memory device;

traffic shaping the buffered plurality of ATM cells; and

transmitting the plurality of ATM cells on a network.

4. (Unamended) The method of claim 1 wherein the traffic shaping of data is performed by a central processing unit (CPU) of a computer.

Sub C2

5. (Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for segmenting asynchronous transfer mode (ATM) data, the program comprises:

a first code section to instruct a CPU of a computer to segment data to generate a plurality of ATM cells, the first code section including segmentation instructions implemented in the CPU to perform the operation of segmenting data;

a second code section to buffer the plurality of ATM cells in a memory device; and

a third code section to traffic shape the buffered plurality of ATM cells.

1 7. (Unamended) The program storage device of claim 5 wherein the program
2 further comprises:
3 a fourth code section to compute a new partial cyclic redundancy check used to
4 protect against bit errors.

1 8. (Unamended) The program storage device of claim 5 wherein the program
2 includes instructions to pad ATM cells which are not complete.

Sub 3
a³
1 9. (Amended) A method comprising:
2 performing asynchronous transfer mode (ATM) reassembly functions with a
3 segmentation and reassembly (SAR) software module implemented in a central processing
4 unit (CPU) including,
5 receiving in an uninterrupted stream a plurality of protocol data units
6 without interrupt in an input buffer, each protocol data unit including a plurality of ATM
7 cells; and
8 retrieving ATM cells from the input buffer until all data corresponding to a
9 payload data unit is retrieved and checking a CRC to determine whether data was received
10 ~~without error.~~

1 10. (Unamended) The method of claim 9 further comprising:
2 dropping the payload data unit when the CRC indicates an error.

1 11. (Unamended) The method of claim 9 further comprising:
2 copying a cell payload from the input buffer into a reassembly buffer.

1 12. (Unamended) The method of claim 11 further comprising:
2 calculating a new partial CRC corresponding to the cell payload.

1 13. (Unamended) The method of claim 11 further comprising:

2 determining whether the cell payload includes an end of payload data unit marker;
3 and
4 copying a second cell payload from the input buffer into the reassembly buffer when
5 retrieved cell payload does not include the end of payload data unit marker.

Sub 4
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1 14. (Amended) A program storage device readable by a machine tangibly
2 embodying a program of instructions executable by a machine to perform method steps for
3 reassembly of ATM data, the program comprising:
4 instructions readable by a CPU of a computer to instruct the CPU to
5 reassemble ATM data, the instructions including reassembly instructions implemented in
6 the CPU to perform the operation of the reassembly of data further including,
7 a first code section to receive a stream including a plurality of
8 protocol data units without interrupt in an input buffer, each protocol data
9 unit including a plurality of ATM cells.

1 15. (Unamended) The program storage device of claim 14 further comprising:
2 a second code section to retrieve ATM cells from the input buffer until all data
3 corresponding to a payload data unit is retrieved and checking a CRC to determine whether
4 data was received without error.

A5
1 16. (Amended) The program storage device of claim 14 further comprises:
2 a third section to copy a cell payload from the input buffer into a reassembly buffer.
